

# Curriculum Vitae: Volker Bromm

## Education

Yale University, New Haven, CT – Astronomy, Ph.D. (2000)

## Professional Experience

Since-Aug. 2019: Chair, Department of Astronomy, University of Texas at Austin

Since-2019: Josey Centennial Professor in Astronomy, University of Texas at Austin

Since-2014: Full Professor, University of Texas at Austin

2009–2014: Associate Professor with Tenure, University of Texas at Austin

2004–2008: Assistant Professor, University of Texas at Austin

04-10/2004: Institute Fellow, Space Telescope Science Institute, Baltimore

2001–2004: Postdoctoral Scholar, Harvard University

2000–2001: Postdoctoral Scholar, Institute of Astronomy, Cambridge University, UK

## Awards and Honors

2016 UT Academy of Distinguished Teachers.

2016 My work featured in BBC Horizon TV episode “Cosmic Dawn” (also shown on the Discovery Channel in the U.S.).

2008 and 2014 McDonald Observatory Board of Visitors Teaching Excellence Award.

2008 and 2014 College of Natural Sciences Teaching Excellence Award.

2009 University of Texas Board of Regents’ Outstanding Teaching Award.

2004 STScI Institute Fellowship (now renamed: Giacconi Fellowship).

2003 Northeastern Association of Graduate Schools Dissertation Award.

2002 Robert J. Trumpler Award, Astronomical Society of the Pacific.

## Service

### Departmental

Graduate Advisor, Astronomy Department, UT Austin, 2005-2010, and 2012-2013  
Graduate Studies Chair, Astronomy Department, UT Austin, since-2014  
Chair, Faculty Search Committee, 2014-2015, 2017-2018

### College of Natural Sciences, UT Austin

Member, 21st Century Graduate Education Strategy Committee, 2015-2017  
Member, Promotion & Tenure Committee, 2017-2018

### Community

Authored articles in popular magazines on the First Stars: *Scientific American* (Dec. 2001), *Mercury* (Sept.-Oct. 2003), *Physics World* (Oct. 2004), *Sky & Telescope* (May 2006, Summer 2013), *Physics Today* (April 2012), *Astronomy* (June 2018).

TV Documentaries: BBC, Discovery Channel, German Public Television.

Science Adviser: NOVA/WGBH (television 2-hour special on "Mystery of the Monster Black Holes"), *The Tree of Life* and *Voyage of Time* movie teams (early universe visualizations, the former was nominated for a Best Picture Academy Award).

Frequent press coverage of our work: Science News, New Scientist, Discover, National Geographic, Nature and Science.

## Educational Activities and Summer Schools

2016 Public Lecture, University of Heidelberg, The First Stars in the Universe.

2015 Public Lecture, Cleveland Museum of Natural History, Frontiers of Science series.

2013 Lecturer at UT's Odyssey Outreach Program, From Eternity to Here.

2011 Lecturer at Summer School, Second Workshop on Numerical and Observational Astrophysics: From the First Structures to the Universe Today, IAFE, Buenos Aires, Argentina.

2008 Lecturer at Cosmology Summer School, The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.

## Research Group and Advisees

- Hubble Postdoctoral Fellow Dr. Anna Schauer (since 2018; reionization and the first stars).
- Postdoctoral Fellow Dr. Maria Emilia De Rossi (2016-2019; work on far-infrared emission from dusty galaxies at high redshifts).

- Postdoctoral Fellow Dr. Shingo Hirano (2016-2018, JSPS Prize Fellow; work on first star formation).
- Postdoctoral Fellow Dr. Andreas Pawlik (2009-2013; work on first galaxy simulations).
- Postdoctoral Fellow Dr. Torgny Karlsson (2006-2009, NORDITA Prize Fellow, Stockholm, Sweden; work on high-redshift chemical mixing).
- Postdoctoral Fellow Dr. Anna Frebel (2006-2008, McDonald Prize Fellow, UT Austin; work on the theory-observational interface of Stellar Archaeology).
- Graduate Student Boyuan Liu (2<sup>nd</sup> year).
- Graduate Student Aaron Smith (PhD 2018; winner of NSF Graduate Fellowship; now an Einstein Fellow at MIT).
- Graduate Student Jason Jaacks (PhD 2018; entered career in environmental/data science).
- Graduate Student Jacob Hummel (PhD 2016; entered career in data science).
- Graduate Student Myoungwon Jeon (PhD 2015; was awarded U Arizona Prize Postdoc in Theoretical Astrophysics; now a faculty member at Kyung Hee University, Seoul, South Korea).
- Graduate Student Chalence Safranek-Shrader (PhD 2014; winner of NASA Graduate Fellowship; now in a data science career).
- Graduate Student Athena Stacy (PhD 2011; winner of JWST Postdoctoral Prize Fellowship).
- Graduate Student Thomas Greif (PhD 2009; I was his MA thesis advisor at UT, then co-advised on his PhD together with Prof. Ralf Klessen at the University of Heidelberg; awarded a Harvard-ITC Prize Postdoc).
- Graduate Student Jarrett Johnson (PhD 2009; now permanent staff position at Los Alamos).
- Undergraduate team (3 current members) research on first black holes and stars (2006-2018).
- Undergraduate Student James Sullivan (Physics, 2017-2018; went on to attend the graduate astronomy program at UC Berkeley, as a DOE Computational Science Graduate Fellowship recipient).
- Undergraduate Student Daniel Miller (Physics, 2008-2009; went on to attend the graduate physics program at MIT).

### **Lectures: Colloquia and Invited Talks**

2004-2019 Numerous invited talks, many of them reviews.

2001-2019 Selected colloquia and seminar talks: Oxford University, Cambridge University, MIT, Yale, Harvard (Institute for Theory and Computation), Caltech, University of Chicago, Berkeley

(Theoretical Astrophysics Center), Space Telescope Science Institute, NASA Goddard Space Flight Center, Institute for Advanced Study, University of Minnesota, NYU, University of Arizona, University of Heidelberg, University of Munich, Copenhagen (Niels Bohr), University of Groningen, University of Utrecht, Leiden University, Monash University, Case Western, University of Delaware, LAM Marseille.

### **Professional Services**

Referee for *Astrophysical Journal*, *Astronomy & Astrophysics*, *Monthly Notices of the Royal Astronomical Society*, *Publications of the Astronomical Society of Japan*, *Space Science Reviews*, *Science*, *Nature*

Panelist for NSF grant proposal review

Proposal review for: German, Swiss, Austrian, Dutch, French and Israeli Science Foundation. The Royal Society.

Member Astrophysics Editorial Board: *Scientific Reports* (a Nature subsidiary).

Associate Editor: *Computational Astrophysics and Cosmology* (Springer/Nature).

Chair of Conference on *The First Stars and Galaxies: Challenges for the Next Decade*, University of Texas 2010, Austin, TX.

Co-chair of Joint Discussion Symposium on *The First Galaxies – Theoretical Predictions and Observational Clues*, IAU General Assembly 2009, Rio de Janeiro

Member SOC: Ringberg 2005; Bash Symposium 2005; Chamonix 2007; IAU Symposium 254, Copenhagen; First Stars III (Santa Fe 2007) and IV (Kyoto 2012); Richard Larson Fest, Yale 2012; EWASS ‘Local Group Cosmology’ 2013; Higgs Centre Workshop ‘The Physics of the Early Universe’ 2014; ‘Signatures of the first objects across cosmic time’, Groningen 2015, EWASS ‘Galaxies Through Cosmic Time’ 2018.

Member Science Working Group: Cosmic Inflation Probe (CIP); Joint Astrophysics Nascent Universe Satellite (JANUS); Single Aperture Far Infrared Observatory (SAFIR); Sub-Arcsecond Resolution Ultraviolet eXplorer (SARUX); JWST Early Release Science Team ‘First Supernovae’.

Chair of American Astronomical Society (AAS) Nomination Committee for its High-Energy Astrophysics Division (HEAD) Officer Election.

NASA appointed U.S. Member (45 total) of European Space Agency’s EUCLID dark energy mission.

**Publications**

Total number of refereed publications = 145

Total number of citations = 13,500

H-index = 59